5

10

## METHODS AND SYSTEMS FOR PROCESSING MICROFLUIDIC SAMPLES OF PARTICLE CONTAINING FLUIDS

## ABSTRACT

The present invention relates to a microfluidic system for processing a cellcontaining liquid. The system includes a microfabricated substrate having an enrichment
channel to prepare an enriched cell sample from the cell-containing liquid. A flow through
member is in liquid communication with the enrichment zone. The flow through member
substantially prevents cells of the cell-containing fluid from exiting the enrichment zone
while allowing liquid of the cell-containing liquid to exit the enrichment zone. A gas actuator
associated with the enrichment zone provides a gas pressure sufficient to move the enriched
cell sample from the enrichment zone.